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Oakland, Calif.

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1948 Spring Flower Book

James' 1948 FLOWER NOVELTIES



COSMOS RADIANCE

ASTER Ballet Queen. A fine new shade of color for asters, deep rose touched with salmon. Assumes a soft bronze effect when flowers are massed. Early and free-flowering, an ideal variety for bedding in the garden and for cut flowers. Wilt-resistant. Pkt. 35c.

ASTER Princess. A beautiful new type of wilt-resistant aster for cutting and for bedding in the garden. The 2-2½ foot plants bear a quantity of early, large flowers on strong stems. Color range in our mixture includes orchid, peach blossom, soft salmon-rose, yellow and scarlet. Pkt. 35c.

COSMOS Radiance. Top All American winner for 1948. Radiance introduces two new colors to Cosmos, deep rose and rich crimson. It is the first bi-color Cosmos to be introduced. A fine showy variety for the garden and in the home and well worthy of the honors it has received. Keeps well when cut for the home. Pkt. 35c.

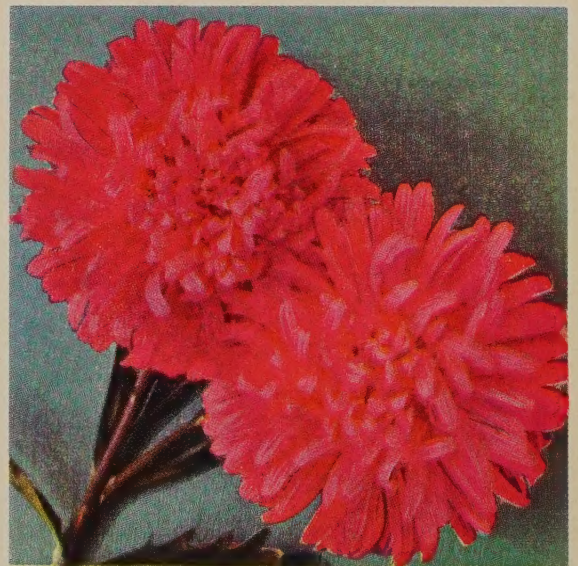
CHRYSANTHEMUM Annual Merry Mixture. Don't fail to try these brighter more varied colors in your garden. Grows easily in most climates. Long, strong stems and lasting flowers, excellent in the garden and for cutting. Pkt. 15c.

CALENDULA Improved Campfire. This variety was developed especially for florists but you can have all of its choicest qualities by planting it in your garden, just like any other Calendula. Good strong stems and large orange-scarlet flowers in profusion. Pkt. 35c.

GAILLARDIA Double Lorenziana Mixed. A fine new strain of double flowers in a choice selection of colors. Dense, bushy plants yield an abundance of brightly-hued flowers in the garden. Double flowers are excellent for cutting. Pkt. 15c.



PRINCESS ASTER



ASTER BALLET QUEEN

NEW FOR YOUR GARDEN THIS YEAR

PETUNIA Growing Rose. Flowers are an intensely brilliant deep rose-pink and habit of growth is dwarf and compact. Plants begin blooming earlier than other dwarf types and stay in bloom just as long. Pkt. 35c.

SNAPDRAGON Cherry Rose. Finally achieved after years of effort. The bright shade of deep cherry-rose found in this new snapdragon is amazing. Stems branch at the base and cover themselves with well-placed flowers to a height of three feet. Uniformly straight and strong spikes are valuable in the garden and for cutting. Pkt. 25c.

VERBENA Salmon Pink. Broad-petaled flowers are bright salmon-pink. Habit of growth is more upright than most, showing the solid mass of flowers to better advantage. Well-filled heads of flowers bloom over a long season; longer stems are fine for cutting. Pkt. 25c.



ANNUAL CHRYSANTHEMUM MERRY MIXTURE



CALENDULA CAMPFIRE IMPROVED



PLANT—MARCH through MAY

Ageratum
Asters
Carnations
Cinerarias
Dahlias
Godetias

Lobelias
Marigolds
Nemesias
Pansies
Petunias
Phlox

Salpiglossis
Schizanthus
Snapdragons
Stocks
Verbenas
Violas



PLANT—MAY through JULY

Ageratum
Asters
Carnations
Cosmos
Dahlias

Lobelias
Marigolds
Nemesias
Petunias
Salpiglossis

Snapdragons
Stocks
Verbenas
Zinnias



PLANT—AUGUST through FEBRUARY

Ageratum
Calendula
Coreopsis
Forget-Me-Not

Geum
Nemesias
Pansies
Primrose

Snapdragons
Stocks
Sweet Williams
Violas

FLOWER BOOK INDEX

This catalog is arranged to help you select the right flowers for the right place in the garden.

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Annuals for **BORDERS** and **LOW**

Most varieties are available from flats in the proper planting season. All are available at any time in seed packets.

AFRICAN DAISY. Dwarf plants to one foot produce masses of flowers in shades of yellow. Pkt. 10c.

AGERATUM. Dwarf, compact plants particularly adapted for borders. **Blue Perfection.** Deep blue flowers on 10-inch plants. Pkt. 10c. **Midget Blue.** Very dwarf, medium blue, 2-3 inches. Pkt. 15c.

ALYSSUM. Popular for edging and bedding. **Violet Queen.** Dwarf, compact; sweetly scented flowers very deep, rich shade of violet. Blooms the entire season. Pkt. 15c. **Carpet of Snow.** Very low and close growing, making a carpet of pure white about 3 inches high. Pkt. 10c.

DIANTHUS plumarius, Spring Beauty. Extra double large flowers in a wide assortment of colors. Pkt. 15c.

DIANTHUS hedderwigii. Colors vary from light rose to crimson; large, 2-3 inches in diameter. **Single or Double.** Pkt. 10c.

LOBELIA. A dainty, compact growing annual for continuous bloom. It is unexcelled for borders, hanging baskets or window boxes.

Crystal Palace. Best dark blue for edging.

Cambridge Blue. Light blue, large flowers, green foliage. Pkt. 10c.

MARIGOLDS Dwarf French. Flowers charming and distinct scabiosa-like in form with tubular central petals flanked by broad guard petals, often in different colors. **Melody.** Bright orange, free flowering. **Yellow Pigmy.** Light lemon-yellow, small double flowers. **Scarlet Glow.** Deep red, dwarf. **Double Harmony.** Rich crimson with gold center. Pkt. 10c.

MIGNONETTE odorata Machet. Ideal for low cover of fragrant flowers in continuous bloom. Pkt. 10c.

NASTURTIUM. Dwarf Double Gem. A mixture of brilliant flowers. **Dwarf Mixed.** Mixture of single and double flowers in brilliant colors. Pkt. 10c.

NEMOPHILA. Insignis Blue. Cup shaped sky-blue flowers with white centers. Useful ground cover in bulb beds. Pkt. 10c.

NEMESIA Nana Compacta Triumph Mixed. 6 to 8 inches. Masses of small flowers in rainbow hues on compact plants. Pkt. 15c.

PANSY. Selected Swiss Giants Mixed. Early flowers, very large, perfectly round, and in fine range of colors. A favorite with professional gardens. Pkt. 50c and 35c.

PHLOX DRUMMONDI. for massing and for borders. The plants grow about 1 foot high, thrive in practically any soil if given a sunny location. **Red Glory, Salmon Glory, Rosy Morn, Gigantea Mixed Art Shades.** All: Pkt. 15c.

CALIFORNIA POPPY. Useful for naturalizing in difficult situations. Pkt. 10c, 1/4 lb. \$1.25, 1/2 lb. \$2.00, 1 lb. \$3.50, 1 oz. 50c.

PORTULACA. For spring and summer bloom. Best in a dry location with full sun. **Grandiflora Double Mixed.** Gay colors, yellow, salmon, rose, and red. Pkt. 15c.



ALYSSUM VIOLET QUEEN



PHLOX GIGANTEA MIXED ART SHADES



MARIGOLD DWARF FRENCH DOUBLE HARMONY

BEDDING *in Full Sun*

VERBENA. One of the most popular garden annuals for beds where a gorgeous mass of color continues throughout the summer. **Spectrum Red.** Intense bright red. **Luminosa.** Flame pink. **Grandiflora Mixed.** Red, pink, blue and white shades. Pkt. 15c.

VIOLA. Flowers smaller and more profuse than Pansies. Although they will endure light shade they are best in full sun. **Arkwright Ruby.** Ruby red. **Blue Perfection.** Medium violet-blue. **Chantreyland.** Rich apricot. **Lutea splendens.** Clear yellow. **White Perfection.** Finest white. **Cornuta Mixed.** Blend of preceding colors. **Johnny-Jump-Up.** Tiny flowers in bloom all season are combination of purple and yellow. Pkt. 25c.

VIRGINIAN STOCK. Colorful low edging plant and ground cover. 1 oz. \$1.25, pkt. 15c.

ZINNIA (Dwarf) Lilliput. Dwarf plants covered with flowers all summer. Double blooms in pastel colors. Pkt. 10c.



PANSY SWISS GIANT



NEMESIA NANA COMPACTA TRIUMPH

PLANT DIRECTLY FROM SEED

We recommend the following annuals be planted directly into the beds from seed. All other varieties should be planted from nursery flats unless the gardener has facilities for growing on to transplantable size.

ALYSSUM
BACHELOR BUTTON
*CALENDULA
CANDYTUFT
*CLARKIA
*GODETIA
*LARKSPUR
LINARIA
LINUM
MIGNONETTE
MORNING GLORY
NASTURTIUM
POPPY
SCARLET RUNNER
SWEET PEA
VIRGINIAN STOCK

Plants prefixed (*) are optional from seed or from flats.



VERBENA GRANDIFLORA MIXED



PORTULACA
GRANDIFLORA DOUBLE MIXED



CORNUTA MIXED VIOLAS



ASTER PEACH BLOSSOM

ASTERS. Colorful and lovely both in the garden and as cut flowers. Give a rich, well cultivated soil.

Improved Crego (Wilt Resistant). Large, shaggy flowers with long curled petals. Plants are strong, heavily branched.

Blue Flame, Crimson, Peach Blossom, White, Mixed Crego. Pkt. 15c.

Improved Giant California Sunshine. Flowers 3 to 4 inches across and composed of a loose row of outer petals arranged around a quill-like yellow central disc. Pkt. 15c.

CALENDULA. Double Campfire. Bright deep orange with a scarlet sheen. **Chrysantha (Sunshine).** Loosely arranged petals; pure buttercup yellow. **Lemon Queen.** Large, rich, lemon-yellow flowers. **Orange King.** Deep orange with darker center. Pkt. 10c.

CYNOGLOSSUM. Firmament. Dwarf habit, bright indigo-blue flowers. Pkt. 10c.

CLARKIA. Double Mixed. Large spikes of pink, rose, and red flowers, are useful for cutting. Pkt. 10c.

DAHLIA. Unwins Dwarf Hybrids Mixed. Provide a mass of color in the garden and splendid flowers for cutting. Includes yellow, apricot, lavender-pink, purple, scarlet, buff and white. Pkt. 15c.

GAILLARDIA. Picta. Showy annuals growing about two feet high and producing a profuse amount of colorful daisies. Red and yellow in a delightful mixture. Pkt. 10c.

GODETIA. Exceedingly lovely in beds and the satiny flowers last well after cutting. Sow in fall for early bloom or in spring. **Duke of York.** Bright scarlet. **Single Upright Mixed. All Double Azalea Flowered Mixture.** Pkt. 10c.

LINARIA. Fairy Bouquet. Dwarf, compact form produces a mass of dainty flowers in many colors. Pkt. 10c.



DWARF PETUNIA GIANTS OF CALIFORNIA RAMONA



PETUNIA THEODOSIA

HEIGHT BEDDING *and* CUTFLOWERS *in Sun*

LINUM Grandiflorum rubrum (Crimson Flax). Glowing crimson-rose flowers for brilliant mass effects. Pkt. 10c.

PETUNIA Single Dwarf Compact. Elk's Pride. Velvety deep purple. **Rose of Heaven.** Brilliant rose. **Rosy Morn.** Soft rose-pink with white throat. **Heavenly Blue.** Light blue. Pkt. 15c.

Dwarf Giants of California Ramona. A sturdy growing type especially suited to pot culture. Flowers are beautifully ruffled and fringed with open well marked throat. Ideal for bedding. Pkt. 35c.

Large Single-Fringed Theodosia. Fringed rosy-pink with gold center. Pkt. 25c.

Glowing Rose. New (see page 3).

Balcony Mixed. Popular large single-flowered variety for bedding and window boxes. Pkt. 10c.

Shirley POPPIES. Double Mixed. Large flowers, resemble Camellia-flowered begonias. Pkt. 10c.

Iceland POPPIES. Best as annual sown in autumn or from January to March for later bloom. Flowers picked in the bud stage will open indoors. Pkt. 15c.

SALVIA splendens dwarf. The reddest of red flowers—blossoms over a long season. Pkt. 10c.

SCHIZANTHUS. Grandiflora Hybrids. Butterfly Mixture. Compact pyramidal plants have brilliant-hued flowers in many colors. Pkt. 10c.

STOCKS. Popular annuals for winter, spring and summer bloom. Plants may be set from September to June. (See front cover.)

Early Giant Imperial of California. 24-28 inches. Freely branching, strong stems. Have a high percentage of double flowers. **Antique Copper.** Copper red. **Elk's Pride.** Royal purple. **Flesh.** Delicate pink. **Golden Gate.** Yellow. **Monterey.** Pink. **Pacific-Blue.** Red-Woods. Blood red. **Santa Barbara.** Chamois. **Santa Maria.** White. **Sequoia.** Rose-carmine. **Tahoe.** Lavender. **Yosemite.** Rose. **Exquisite Mixed.** Mixture of above varieties. Pkt. 15c.

VISCARIA. Large single flowers in red, white and blue. **Mixed.** Pkt. 15c.

Annuals for SHADE

CINERARIA. Start seed in late summer for winter and spring bloom or in early spring for summer bloom. Give protection during the coldest weather. **California Super Giants Mixed.** Big rounded trusses of immense 3- to 4-inch flowers, in brilliant shades of blue, purple, salmon, white and wine red. Pkt. 35c. **Multiflora Nana.** Smaller flowers but lots more of them. Good color range. Pkt. 35c.

FORGET-ME-NOTS. Low growing plants making an ideal cover for beds of Rhododendrons, Fuchsias or Azaleas. Best for shaded beds. **Alpestris.** Light blue, pink buds; free branching. **Blue Basket.** Dark blue, fairly upright growth. Pkt. 10c.

LOBELIA (See page 4)

SALPIGLOSSIS (See page 8)

WALLFLOWER. Hardy annuals, do well in shade or sun. **Mixed.** Pkt. 10c.



SALPIGLOSSIS TALL EMPEROR (Page 8)



ICELAND POPPY



STOCK EARLY GIANT IMPERIAL

James' TALL ANNUALS for Sun

BACHELOR BUTTON. Double flowers borne on tall stems. **Pinkie.** True pink. **Snowman.** Pure white. **Jubilee Gem.** Double dark blue. **Double Mixed.** Good double flowers in all shades. Pkt. 10c.

COSMOS. Gorgeous flowers supply a colorful effect during late summer and fall. Fine for cutting. **Sensation Mixed.** Finest large flowering type. **Double Crested Mixed.** Early flowers are crested in center. Pkt. 10c.

CANTERBURY BELLS. Biennials. Sow seed one year, flowers the next. **Single Mixed.** Pkt. 10c.

CHRYSANTHEMUM. This annual type produces masses of brilliant flowers with little effort. **Annual Single Mixed.** Pkt. 10c.



SNAPDRAGON CAMPFIRE

GYPSOPHILA. Misty blooms on light feathery growth. **Elegans Grandiflora Alba.** Specially selected strain of white flowering. Pkt. 10c.

HELIANTHUS Sungold. Brilliant golden yellow flowers are double. Tall, 4-5 foot stems. Pkt. 15c.

LARKSPUR. Annual delphiniums have finely cut, feathery foliage to set off the handsome spikes of large double blooms. Sow from September to May or set out plants from February to June. **Lilac King.** Double lilac. **Pink King.** Soft salmon rose. **White King.** Glistening white. Pkt. 10c.

MARIGOLDS. Plant the tall kinds in the border, reserving the dwarf kinds for bedding and edging.

Carnation-Flowered, Guinea Gold. Rich orange. **Yellow Supreme.** Creamy lemon-yellow. Pkt. 15c.

Chrysanthemum-Flowered, Yellowstone. Golden-yellow petals incurved, globular flower. Pkt. 15c.

Dahlia-Flowered, Orange Sunset. Large deep orange. **Sunset Giants.** Yellow and orange flowers largest of all Marigolds. Pkt. 15c.

SALPIGLOSSIS. Beautifully veined lily-like flowers on branching stems in many brilliant tones such as blue, purple, rose and scarlet.

Tall Emperor. Mixed. Pkt. 15c.

SCABIOSA. Pin Cushion Flower. Beautiful hardy annuals, bloom from early July without interruption until frost. **Large-Flowered Tall Double-Shasta.** Pure white. **Mixed.** Large flowers, unusual colors. Pkt. 15c. **Imperial Giant—Blue Moon.** Deep lavender-blue, with strong stems. Pkt. 15c.

SNAPDRAGON. One of our finest annuals for garden decoration and cutting. They prefer a light soil in a sunny location. Sow seed or set plants out any time. Our varieties are of the best rust-resistant types.

Maximum or Super Giant Type. Grows 3 to 3½ feet high with large flowers on branching stems. Ideal for cutting or tall borders and background planting. **Alaska.** White. **Campfire.** Scarlet. **Canary Bird.** Yellow. **Copper Queen.** Copper shades. **Crimson King.** Pkt. 15c.

Super Majestic Type. 18 to 24 inches, a good height for bedding—low branching and compact. Individual flowers large and brightly colored. **Amber and Gold.** Amber hoods, gold lips and rose tubes. **Harmony.** Yellow and terra cotta. **Red Rocket.** Fiery red. **Rosalie.** Rose. **Shasta.** White. **Silver Pink.** Deep pink with white blotch. **Yellow Jacket.** Deep yellow. **Mixed.** All: Pkt. 15c, 6 Pkts. 75c.

TITHONIA (Mexican Sunflower). **Avalon Earliest.** Good, tall plants for background planting with brilliant yellow, orange and orange-red flowers in late summer and fall. Pkt. 15c.



SENSATION COSMOS MIXED



SCABIOSA



BACHELOR BUTTON



Terra-Lite

BRAND

VERMICULITE

PLANT AID

A GROWING MEDIUM ✓ FOR ROOTING CUTTINGS ✓ FOR PLANT PROPAGATION ✓ FOR SEED GERMINATION
MULCH ✓ TO LIGHTEN HEAVY SOIL ✓ FOR STORING BULBS

What is Terra-Lite . . .

Real news to amateur and professional growers has been the development of a new plant aid. Research has proven that this material produces healthier plants, eliminates damping off, requires less watering because of moisture holding properties, lightens heavy soil and is ideal for storing bulbs. This amazing new product, Terra-Lite Brand Vermiculite Plant Aid, answers the needs of the window-box gardener equally as well as it does the requirements of the commercial grower.

Terra-Lite is a brand of vermiculite specially refined for horticultural uses. It is manufactured by exploding a rare form of mica under intense heat. This mica-like ore is composed of thousands of separate layers per inch with a small amount of water between each layer. When the ore is subjected to a temperature of 2000 degrees, the water vaporizes into steam and separates each layer by many tiny air cells. This is the secret of Terra-Lite's ability to hold so much air and water, and to give off water to plants as needed.

Terra-Lite is manufactured according to the specifications of the Vermiculite Institute.

Seed Germination . . .

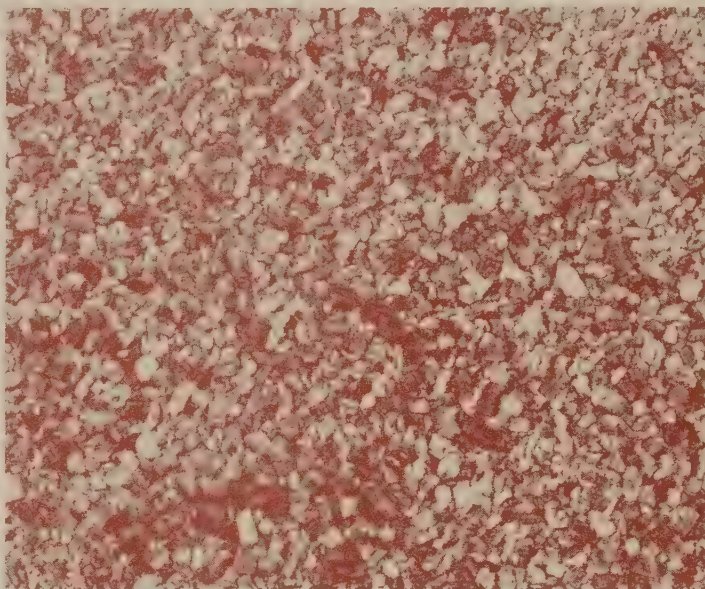
Because of Terra-Lite's light, fluffy nature, it is ideal for use in seed flats. It both lightens the weight of a single flat and requires less frequent watering during



Plants can be easily pulled from seed flat when Terra-Lite is used as medium.*

the germination period. For starting seedlings, best results have been obtained when flats of straight Terra-Lite were subirrigated. It is possible, however, to produce seedlings without subirrigation; but more care must be taken when watering because the Terra-Lite is light in weight and easily displaced.

Terra-Lite is not a fertilizer so does not contain plant food to sustain growth. When the first true leaves



Seed flat of Terra-Lite showing actual size of granule.

appear on seedlings, the flats must be treated with chemical fertilizers according to manufacturer's specifications.

Seeds planted in Terra-Lite germinate more promptly and in better percentage than when planted in other mediums. This is particularly true of small seeds and those especially susceptible to pre-emergence damping-off.

The mass of hair-roots produced by seedlings grown in Terra-Lite is much more dense than that produced by any other medium. In transplanting, this mass of roots usually comes loose with a ball of Terra-Lite attached. This ball should be planted intact without trying to wash it off. It is because of this mass of roots, usually left behind in transplanting seedlings, that Terra-Lite-grown seedlings are so superior. Don't lose this advantage by breaking off the roots.

Terra-Lite is chemically inert, and it does not contain any bacteria or fungus. Therefore, no sterilization is needed for the first use, but after several usages, if rot appears the Terra-Lite should be sterilized.



Vegetable plot with and without Terra-Lite being used as soil conditioner. Note luxuriant growth of corn and vegetables where Terra-Lite was used.

Rooting Cuttings . . .

Experimentation has proven Terra-Lite to be the best medium for rooting cuttings. Ideally, the medium used should supply plenty of moisture yet not exclude air, and should permit enough moisture to evaporate from the surface to keep cuttings turgid. Terra-Lite fulfills these conditions.

Not only are the roots better when using Terra-Lite, but they emerge from three days to three weeks sooner. Due to this factor, less time on the bench is required by the cuttings. Three cuttings can be taken off in the time that would normally produce only two. Because the roots are much stronger, many florists use a pot one size larger than normal when potting these cuttings, and in this way save one shift.

Evergreen cuttings (and other subjects requiring a low pH for strong rooting) may be set in a mixture of half sand and half Terra-Lite.

Terra-Lite should never be pounded around cuttings. Its unusual structure, so beneficial in providing cuttings with just the proper amounts of air and water, can be damaged by pounding or rough handling.

Soil Lightener . . .

In the manufacturing process Terra-Lite is subjected to intense heat which drives off all chemical or vegetable matter. Therefore, Terra-Lite contains no toxic nutrients or harmful elements.

Terra-Lite lightens and aerates heavy clay type soils, enabling water and air to reach roots. Water is held at root level for much longer periods, hence less frequent watering is required. Terra-Lite keeps sandy soil from drying out rapidly, by releasing water gradually. Even a small amount of Terra-Lite added to soil will make a striking difference.



Shrub 16 days
Deutzia Lemoinei



Carnation 25 days
Dianthus Caryophyllus



Mockorange 27 days
Philadelphus Virginalis

Cuttings on the left were rooted in Terra-Lite. Sand was used to produce those on the right. Note difference in root growth.

Terra - Lite lightens heavy clay soil and adds the ability to retain moisture in a sandy soil.*



Storing Root Crops and Bulbs

Because of its ability to hold and release moisture, Terra-Lite acts as an almost perfect moisture control. It will not absorb the moisture from the inside of stored tubers, but it does take up the free water from the outside. When bulbs are stored in a cellar where temperatures may drop below freezing for a few hours during sub-zero weather, Terra-Lite will prevent any injury to the bulbs. Terra-Lite has actually cut losses from stored tubers as much as 40 percent.



Terra-Lite being poured around bulbs for winter storage. Terra-Lite will assure correct amount of air and moisture throughout duration of storage.*

For Transplanting

Used in transplanting bushes, shrubs, plants, or small trees, Terra-Lite provides the same liberal amounts of water to promote root growth. By loosening soil at the base of transplanted bushes or shrubs, Terra-Lite lessens resistance to the healthy root growth, lets roots reach out for food. Holding water as it does, Terra-Lite protects roots from the drying action of wind and sun. Any soil is improved when Terra-Lite is used.

As a Mulch

Terra-Lite meets all the requirements of a winter garden mulch. It never mats down or becomes soggy because its pore structure will not allow it to become saturated. Because of its high insulating factor, it prevents wide fluctuation in winter soil temperature. 2 to 3 inches of Terra-Lite is quite as effective as several inches of less efficient material. In the spring this Terra-Lite "blanket" can be mixed into the soil as a conditioner thus giving a two-fold benefit.

An application of Terra-Lite around plants after the first heavy summer rain will prevent drying of the soil and consequent damage to plants.

DIRECTIONS

SOIL LIGHTENER: Terra-Lite is the perfect material to give sandy soils additional water and food holding ability. Ideal for lightening heavy clay soils. Can be used up to one-half the total volume of soil. Valuable in greenhouses for potting mixtures and for improving bench soil.

ROOTING CUTTINGS: For chrysanthemums, ageratum, carnations, etc. use straight. For certain cuttings where a medium with a low pH is required, use $\frac{1}{2}$ sand and $\frac{1}{2}$ Terra-Lite. Terra-Lite should be thoroughly watered before inserting cuttings. This will assure the cuttings remaining in position. After the cuttings have been placed in Terra-Lite, it is best to water them again, using a hose with a spray or spreader. This distributes the Terra-Lite around the base of the cuttings. Cuttings root faster, less water is required, and damping off is virtually eliminated. **CAUTION: DO NOT POUND THE TERRA-LITE AROUND THE CUTTINGS.**

STARTING SEEDLINGS: Use just as it comes from the bag for growing seedlings. Water, and then sow seeds. When first leaves appear, the plants must be watered with a nutrient solution as Terra-Lite does not contain plant food to sustain growth. A weak solution of complete plant food, one and one-half ounces of fertilizer to a gallon of water, is suggested. Feed at intervals of four to eight days depending upon the growth of the plants. Care should be taken that none of the nutrient salts remain on the leaves to cause burning. These can be washed off by sprinkling with plain water through a hose or sprinkling can. Seeds can also be started by using a mixture of Terra-Lite and soil. When mixed with soil, place

a layer of Terra-Lite one inch deep on the mixture and then sow the seeds. Terra-Lite produces bigger, huskier roots. Seedlings recover sooner from the shock of transplanting. **CAUTION: DO NOT SATURATE SEED FLATS!**

HOME GARDENS: Mix two bushels to each one hundred square feet of planting area in heavy soils. One-half of above formulae in medium loam soils. Will aerate the soil and retain moisture.

TRANSPLANTING: Dig hole at least six inches larger than plant roots. Mix Terra-Lite with top-soil that has been removed, then place mixture around roots. Provides abundant air and water, promotes healthy plant growth.

IN FLOWER BOXES OR POTS: Mix half and half with soil. Gives new color to potting mixtures while improving plants and blossoms.

NEW LAWNS: In preparing seed bed, mix two bushels per one hundred square feet. After seeding, cover entire area using one-quarter inch over seed. Water thoroughly with fine spray.

STORING BULBS AND ROOT CROPS: Pour Terra-Lite around bulbs to be stored. Acts as moisture control preventing damage from too much or too little moisture. **CAUTION: DO NOT PACK DOWN MATERIAL OR WATER IT WHEN STORING.**

SUMMER AND WINTER MULCHING: Use two or three inches of Terra-Lite in place of several inches of other material. Prevents drying out, insulates against cold. Stops winter heaving and summer baking. Works into the soil in the spring and does not rot or deteriorate.

8715 MacARTHUR BLVD.

THE E. JAMES NURSERY

OAKLAND 5, CALIFORNIA

TERRA-LITE Brand Vermiculite PLANT AID

2-bushel ($2\frac{1}{2}$ cu. ft.) bags, ea. . . . \$1.75 (By mail, add 35c) $\frac{1}{2}$ -bushel bags, ea.85 (By mail, add 20c)
4-quart bags, ea.39 (By mail, add 10c)

($2\frac{1}{2}$ cu. ft. bag will cover 120 square feet $\frac{1}{4}$ " thick)

ZINNIAS, Super Crown of Gold Pastel Tints. The finest large flowering type, containing a wide range of pastel tints. Mixed. Pkt. 15c.

Dahlia Flowered. Robust plants, well-branched. Huge flowers, resemble exhibition Dahlias. **Canary Bird.** A delicate shade of primrose. **Crimson Monarch.** Rich crimson, largest and best of red shades. **Golden Dawn.** Beautiful shade of golden-yellow with red center. **Illumination.** A bright rose-pink. **Oriole.** An immense orange and gold bi-color. **Polar Bear.** A very large pure white, the best white. **Scarlet Flame.** Very bright scarlet. **Will Rogers.** Most beautiful scarlet red. **Choice Mixed.** Pkt. 10c.



ILLUMINATION

ORIOLE

SCARLET FLAME

Annuals for VINE EFFECTS

MORNING GLORY (Ipomoea). For quick vine effects and lots of summer color. **Cornell.** Very large cornelian red flowers, have white border. **Heavenly Blue Improved.** Deep sky blue shading lighter toward center. **Pearly Gates.** The white counterpart of Heavenly Blue. **Scarlet O'Hara.** Velvety scarlet flowers borne in profusion on husky vines. Pkt. 15c.

NASTURTIUMS. Golden Gleam. Large double yellow flowers on long stems. **Scarlet Gleam.** Fiery orange-scarlet. **Gleam Hybrids.** Mixture of pink, yellow-orange and red shades. **Trailing and Tall Mixture.** Useful, includes dark-foliaged varieties. Pkt. 10c.

SWEET PEAS. Early Spencer. Best for blooms in winter or early spring. **Bridesmaid.** Silvery-pink. **Harmony.** Lavender. **Hope.** White. **Laddie.** Light rose-pink. **Mariner.** Blue. **Shirley Temple.** Rose-pink. **Treasure Island.** Golden-orange. **Mixed.** Blended assortment of all. Pkt. 15c.

Summer Spencer. Best for summer and fall blooms. **Ambition.** Lavender. **Bonnie Briar.** Rose-pink. **Colorado.** Orange. **Olympia.** Purple. **Reflection.** Clear blue. **Red Boy.** Crimson. **Sextet Queen.** White. **The Admiral.** Dark blue. **Warrior.** Red. **What Joy.** Cream. Pkt. 10c.

Cuthbertson Sweet Peas. The finest new strain; larger flowers, beautiful colors; long strong stems. **Coline.** Scarlet. **Evelyn.** Salmon-cream. **Frank G.** Lavender. **Lois.** Rose-pink. **Tommy.** Blue. Pkt. 10c. All six for 50c.

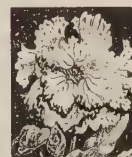
SCARLET RUNNER. Quick-growing vine with scarlet flowers and edible beans. Pkt. 10c.



MARIGOLD
ORANGE SUNKIST GIANT



MARIGOLD
YELLOW SUPREME



OUR MID-YEAR PLANTING GUIDE READY MAY FIRST

Lists the finest new introductions and choice varieties of:

CHRYSANTEMUMS PELARGONIUMS
FUCHSIAS CARNATIONS
DOUBLE PETUNIAS

An illustrated guide to summer and fall color in your garden.

HOW TO PROTECT YOUR GARDEN FROM

The principal garden pests and diseases are described below, together with a selection of materials to combat them. Remember, the old adage, "An ounce of prevention is worth a pound of cure", is as true in the garden as anywhere. FOLLOW THE DIRECTIONS OF THE MANUFACTURER CAREFULLY.

PRICES SUBJECT TO CHANGE.

ANTS. Keep them out of your garden. They are accomplices in the damage caused by aphids, scale and mealy-bugs because they transport the young of these pests to choice feeding areas on your plants.

ANT-B-GON. Set of 4 dispensers 70c; refill liquid—4 oz. bottle, 25c; pint 60c.

ANT-FOIL STICKS. Pkg. of 10, \$1.00.



Aphids and Ants

APHIS, LEAF HOPPER and WHITE FLIES. Sometimes called "plant lice", a well-deserved name. Aphids attack the succulent new growth of almost all shrubs and trees. The new growth of roses is particularly vulnerable. Aphids feed on the plant juices in the stems and leaves, often causing them to curl. Leafhoppers and White Flies detected when foliage is disturbed.

RED ARROW. Liquid insecticide. 1-oz. bottle, 35c; 4-oz., \$1.00; 16-oz., \$2.85.

BLACKLEAF "40". Nicotine sulphate; should be mixed with an oil spray. 1-oz. bottle, 36c; 5-oz., \$1.10; 1 lb., \$2.75; 2 lbs. \$4.50.

BOTANO DUST. Package serves as duster, holds 10 oz., 60c.

END-O-PEST. Package serves as duster, holds 10 oz., 79c; refill cartridge, 10 oz., 59c; 2-lb. carton, \$1.50.

EXTRAX. Liquid insecticide. 4 oz. bottle, \$1.00; 16-oz., \$2.85.

ORTHOL. Liquid insecticide containing oil, nicotine and DDT. 4-oz., 35c; 16-oz., 75c.

BETTER. Eat holes in stems, leaves and fruits. The best known beetle is the Diabrotica (green Lady Bug) with 12 spots on its back. Others of importance are the Elm-leaf beetle and the Flea-beetle. Use products listed top of next column.

BOTANO DE LUXE. Dust containing FERMATE and 666. 8-oz. duster, 75c; 2-lb. refills, \$1.50.

CALTOX. Garden dust containing cryolite, copper and zinc. Package serves as duster, holds 10 oz., 60c.

END-O-PEST. Listed under Aphids.

ORTHOL. Listed under Aphids.

PEST-B-GON. Liquid insecticide containing 20% DDT. 4 oz., 65c; pints, \$2.00. Pest-B-Gon Duster, 69c; refill, 2 lbs., \$1.00.

BLACKSPOT, BLIGHTS and RUST. Identified by discoloration of foliage (and die-back in case of blights). Control:

BORDO MIXTURE. Prepared powder for dilution with water. 1-lb. package, 50c; 4-lb., \$1.25.

FERMATE and DUPONT SPREADER-STICKER. See Mildew.

FLOTOX. Finely powdered sulphur used as dust or diluted with water for spray. 26-oz. package, 35c.

GREENOL. Liquid fungicide containing copper. 4-oz., 60c; 16-oz., \$1.50; 1/2 gal., \$5.00.

CATERPILLARS (WORMS). Eat the leaves, flowers and fruits of a great variety of plants; may sometimes cause complete defoliation. Controls for caterpillars:

BOTANO DUST. Listed under Aphids.

EXTRAX. Listed under Aphids.

LEAD ARSENATE. Stomach poison in powder form. Place in solution with Volck (see below) for effective coverage. 1 lb., 50c; 4 lbs., \$1.50.

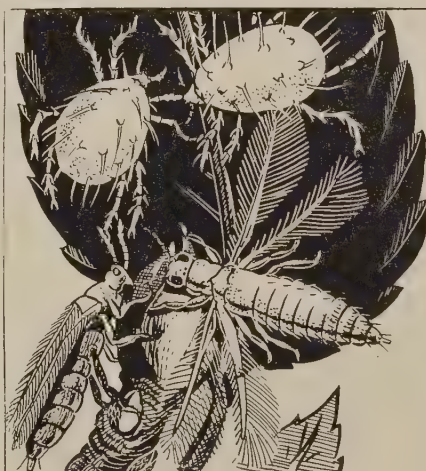
CUTWORMS and WEEVILS. Larvae of night-flying moths hide in soil at base of plants and chew on stem at ground level; sometimes go higher to eat buds and foliage. Controls:

APPO CUTWORM BAIT. Poisoned apple bait. 1-lb. package, 45c.

BUG-GETA PELLETS. Compressed poisoned bait. 12-oz. package, 35c; 2 lbs., 75c; 5 lbs., \$1.50; 25 lbs., \$5.60.

DOGS. Certain plants in your garden may become regular visiting points for dogs, to the detriment of the appearance of the plants. Control:

SCRAM. Dog repellent. Shaker carton, 49c.



Red Spiders and Thrips

EARWIGS. Dark chestnut-brown in color with a pair of forceps at the rear; become very active and should be controlled in early summer. If uncontrolled will finally invade the home. Voracious eaters of succulent foliage; feed at night. Use:

ORTHO EARWIG BAIT. Specially prepared poison bait attractive to Earwigs. 2 1/2-lb. bag, 90c.

GARDEN SPRAY SET. Contains one 4-oz. bottle each of Extrax insecticide, Greenol liquid fungicide and Volck oil spray. Use all three in one solution for control of many insects and diseases in the garden. Set, \$1.85 each.

LEAF CURL. Makes miserable monstrosities of peach foliage in spring. For best control, spray in the dormant season and again in the spring just as the buds swell. Use these for leaf curl:

BORDO MIXTURE. Listed under Blights.
GREENOL. Listed under Blights.



Mealy Bugs and Scale

MEALYBUGS and SCALE. Suck the plant juices of a great variety of perennials, shrubs and trees. Must be hit with a driving spray. Controls:

ORTHOL. Listed under Aphids.

VOLCK OIL SPRAY. 4-oz. bottle, 35c; 16-oz., 70c; 1-gal., \$2.85.

MILDEW. Roses are especially vulnerable. White powdery substance appears on stems and foliage and flower buds. Follow-up essential to complete control, particularly in foggy areas. Controls:

BOTANO DUST. Listed under Aphids.

FLOTOX. Listed under Blights.

GREENOL. Listed under Blights.

DUPONT FERMATE. Prepared fungicidal dust recommended by rosarians. 3-lb. bag, \$3.00. For preparation as a spray, should be used with

DUPONT SPREADER-STICKER. Insures efficient coverage. 16-oz. \$1.00.

RED BERRY MITE. Fruits of the blackberry do not mature properly, part of the fruit retaining red color. Controls:

RED ARROW. Listed under Aphids.

ORTHOL. For use when foliage present. Listed under Aphids.

EXTRAX (Listed under Aphids.) Combined with

VOLCK. Listed under Mealy Bug.

DAMAGE BY PLANT PESTS AND DISEASES

RED SPIDERS and THRIPS. Cause mottled graying or yellowing of the foliage, resulting in ultimate loss of the plant. Found on the undersides of leaves through the growing season. Do not like moisture and frequent sprinkling of the foliage will discourage them. For complete control use:

RED ARROW. Listed under Aphis.

EXTRAX (Listed under Aphis.). Combined with

VOLCK. Listed under Mealybugs.

ORTHOL. Listed under Aphis.

RODENTS (Rats, Mice, Moles and Gophers). Use poison baits and traps. Recommended:

FORCE'S GOPHER KILLER. 60 pellets, 50c; 175 Pellets, \$1.00.

FORCE'S MOLE KILLER. 2 1/2-oz. box Pellets, 50c; 7-oz. box Pellets, \$1.00.

ORTHO RODENT DESTROYER. Poisoned grain bait for gophers, squirrels, rats and mice. 6-oz. box, 50c; 1-lb., 75c.

ORTHO RAT BAIT PELLETS. Red squill bait in handy pellets. 2-oz. box, 25c; 6-oz. box, 45c.

RODENT BOMBS. Kills by poisonous fumes. Efficient when soil is moist, easy to use. 75c per doz.

AMPCO GOPHER TRAP. Self-setting and efficient. 75c.

MACABEE GOPHER TRAP. 50c.

SUPERIOR GOPHER and MOLE TRAP. Dual-purpose trap, has no sharp prongs, kills by strangulation, 30c.

ROSE SPRAY KIT. Handy kit contains one 2-oz. bottle each of:

EXTRAX (listed under Aphis) and

GREENOL (listed under Blights) combined in the same solution, makes an excellent spray for the control of most rose pests. \$1.00.

ROSE WEEVILS. Fuller's rose weevil and the rose snout beetle are small insects with long snouts used to penetrate stems and flower buds of roses, sucking out plant juices. Use:

ORTHO ROSE DUST. Dust containing Rotenone, Pyrethrum, DDT, Ferimate and Sulphur. 8-oz. Duster, \$1.00; 1-lb. refill, \$1.25.

CALTOX. Listed under Beetles.

PEST-B-GON. Listed under Beetles.



Snails and Slugs

Poisoned baits are good controls

SLUGS and SNAILS. Eat great chunks out of foliage of a wide variety of plants during the course of a night's foraging. Fortunately, they like our poison baits, too. Use:

BUG-GETA MEAL. 2 1/2-lb. bag, 75c; 6 lbs. \$1.50; 25 lbs., \$5.60.

BUG-GETA PELLETS. Listed under Cutworms.

SNAROL. Poison bait in meal form. 1-lb. package, 35c; 2 1/2 lbs., 65c; 6 lbs., \$1.25.

SOD WORMS (Lawn Moth). If small yellowish-brown butterflies fly jerkily over your lawn at dusk, or webs in lawns sparkle with morning dew, you have it. Eggs hatch into larvae, feeding on grass roots, causing irregular brown patches. For immediate relief, use the recommended liquids; for long-time control, give one application of the recommended arsenical. Use:

RED ARROW. Listed under Aphis.

EXTRAX. Listed under Aphis.

LEAD ARSENATE. Listed under Caterpillars.

SOWBUGS. Feed on decayed vegetable matter, but vary their diet with small bedding plants and strawberries. Use:

ORTHO SOW BUG KILLER. Specially prepared poison bait for sow bug. 1-lb. carton, 50c.

WEEDS. The new weed killers are very efficient, and best results are obtained by using a tank sprayer. Advisable to set aside your old equipment for this purpose as it is not possible to clean out well enough to insure no damage to foliage of plants when next used for insect spray. Weeds most vulnerable when in full growth and air is humid. Recommended:

AMMATE. Best for poison oak. Non-selective killer in powder form; dilute with water. 2-lb. jar, 95c; 6 lbs., \$2.55.

END-O-WEED. Selective; kills broad-leaves weeds without injury to grasses. 1/2 pt., \$1.00; 1 qt., \$2.75; 1 gal., \$7.50.

TRIOX. Kills weeds and sterilizes soil. Non-selective. Qts., \$1.00; 1 gal., \$3.50.

WIREWORMS, NEMATODES and the GARDEN CENTIPEDE. Prepare the soil before planting to rid the soil of these pests.

ORTHO SOIL FUMIGANT. 4-oz. bottle, 35c; 1-pt., \$1.00.

D-D SOIL FUMIGANT. 1-gal., \$5.85; 1-qt., \$1.75, 1-pt., \$1.00. Apply at the rate of 1 gal. per 1500 sq. ft.

WOUNDS. Pruning wounds should be treated to prevent damage by decay and disease. Use:

TREE SEAL. 1-pt., 35c; 1-qt., 50c; 1-gal., \$1.50.

LOWELL SPRAYERS AND DUSTERS



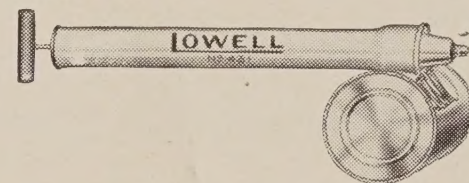
GALVANIZED COMPRESSED AIR SPRAYERS

Pennant. Holds up to 4 gallons of spray solution. Superior construction, best safety features. \$13.50. **Brass,** \$19.20.

Junior. Holds 2 1/2 gallons. Handy for the small garden. Sturdy, safe. \$10.90, **Brass,** \$17.40.

Reliable. Holds up to 3 3/4 gallons. Economical, efficient. \$9.80.

HAND SPRAYERS



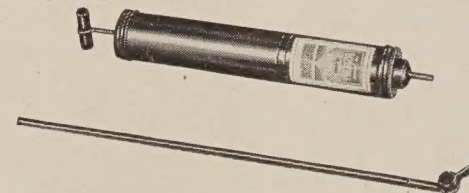
Senator. Efficient, continuous action sprayer; 1 qt. capacity, \$1.20.

Challenger. Sturdily constructed sprayer holds 3 quarts; continuous action. \$2.45.

Ambassador. Continuous action. Heavy glass jar holds 24 ounces of spray solution. \$2.00.

Nu Day. Small 1-pt. sprayer for household and occasional garden use. 60c.

DUSTERS



Roto-Blast. A vast improvement over the conventional type of garden duster. Long reach, effortless pumping, efficient discharge from any position; swivel nozzle adjusts to any position. \$1.80.

Sentry. Small, efficient duster for home and garden. 70c.

DILUTION CHART

Dilution		Insecticide Concentrate to 1 gallon Water
1	to 25	1/3 Pints
1	to 50	6 Tablespoons
1	to 100	3 Tablespoons
1	to 200	1 1/2 Tablespoons
1	to 400	2 Teaspoons
1	to 800	1 Teaspoon

3 Teaspoons=1 Tablespoon
2 Tablespoons=1 Fluid Oz.
16 Fluid Ounces=1 Pint
2 Pints (32 oz.)=1 Quart
4 Quarts (128 oz.)=1 Gallon

PLANT FOODS AND SOIL CONDITIONERS

BALANCED FERTILIZERS

R.A.C. ACID PLANT FOOD. Specially prepared for Camellias, Azaleas, Rhododendrons and other acid-loving plants. 3 lbs., 40c; 10 lbs., 95c; 25 lbs., \$1.80; 100 lbs., \$5.00.

GAVIOTA. An all-around balanced fertilizer for the garden. 4 lbs. per sq. foot. 10 lbs., 80c; 25 lbs., \$1.65; 50 lbs., \$2.75; 100 lbs., \$4.50.

VIGORO. An all-purpose fertilizer for lawns, bedding plants, shrubs and trees. Use 4 lbs. for each 100 sq. ft. 5 lbs., 45c; 10 lbs., 85c; 25 lbs., \$1.50; 100 lbs., \$4.00.

MILORGANITE. An organic fertilizer especially for lawns. Use 4 lbs. per 100 sq. ft. 25 lbs., \$1.50; 50 lbs., \$2.50; 100 lbs., \$4.00.

SIMPLE FERTILIZERS

ALUMINUM SULPHATE. For developing acid content of other fertilizing materials. 2½ lbs., 35c; 10 lbs., \$1.00; 25 lbs., \$2.00; 50 lbs., \$3.50.

AMMONIUM PHOSPHATE. For quick action to tone up the foliage. 5 lbs., 65c; 10 lbs., \$1.00; 25 lbs., \$2.00.

BLOOD MEAL. Concentrated, quick acting. Use 1 lb. for each 60 sq. ft. 4 lbs., 65c; 8 lbs., \$1.25.

BONE MEAL. Especially good for bulbs, a good all-around fertilizer. 5 lbs., 65c; 10 lbs., \$1.25; 25 lbs., \$2.25.

SULPHATE OF AMMONIA. Quick-acting plant and lawn stimulant. Use at the rate of 1 lb. to 250 sq. ft. 2½ lbs., 35c; 5 lbs., 60c; 10 lbs., \$1.00; 25 lbs., \$2.00.

COTTONSEED MEAL. For acid-loving plants; rich in nitrogen. 5 lbs., 70c; 10 lbs., \$1.35; 25 lbs., \$2.75; 100 lbs., \$10.00.

SULPHATE OF POTASH. Improves color of flowers and strength of stems. 5 lbs., 60c; 10 lbs., \$1.00.

SUPERPHOSPHATE. Hastens maturity of flowers and fruits. 5 lbs., 45c; 10 lbs., 75c.

LIQUID FERTILIZERS

These are most practically and efficiently applied by making up a concentrated solution in a bucket, attaching HOZON proportioner to faucet and applying through garden hose and sprinkler. HOZON proportioner with complete instructions, \$1.75.

PLANT-CHEM. Safe, odorless, scientifically-balanced plant food with complete nutritional requirements for plants plus plant hormones. Size listed makes amount of solution specified. 16 gals., 25c; 37½ gals., 50c; 100 gals., \$1.00; 400 gals., \$2.00; 1200 gals., \$5.00.

ACID PLANT-CHEM. In same sizes and prices except 50c package. Makes an excellent fertilizer for acid-loving plants.

LAWN CHEM. Specially developed for new and old lawns. Safe and easy to use. 100-gal. size, 50c; 400-gal. size, \$1.50; 1200-gal. size, \$4.00.



SOIL CONDITIONERS

AGRICULTURAL LIME. An organic powdered shell flour for lightening and sweetening soils. Apply 100 lbs. to 500 sq. ft. 100-lb. bag., \$1.50.

GREENALL HUMUS BUILDER. Blend of manure and vegetable filler, finely ground. Excellent for mulching. Apply 2½ cubic ft. bag to 250 sq. ft. Each, \$1.50.

GROZ-IT. Finely pulverized sheep manure practically free from weed seeds. 50-lb. bag, \$1.35; 100-lb. bag, \$2.50.

GYPSUM. Improves texture of heavy adobe soils. Apply 100 lbs. to 500 sq. ft. 100-lb. bag, \$1.50.

HYDRATED LIME. To lighten and sweeten heavy soils. Apply 20 lbs. to 100 sq. ft. 50-lb. bags, \$1.25.

LEAF MOLD. An important source of plant food and an excellent soil conditioner for acid-loving plants. Sack, \$1.50.

MANURE. Well-rotted cow manure for plant food and soil conditioning. Sack, 75c, at the nursery.

MILLER'S COMPOST-MAKER. Converts organic wastes (leaves, grass clippings) to valuable humus. 5 lbs., \$1.00.

PEAT MOSS. Conserves moisture and improves soil texture. Canadian horticultural grade: Bales, each \$5.00; ½ bales, \$3.00; bags, \$1.50.

SAND. Clean sand for propagation and soil mixtures. 100-lb. bag, 75c.

SOIL. Good grade of garden loam. Sack, 75c. Price by the yard quoted on request.

SOILTEX. Containing finely pulverized sheep manure and peat. 2 cu. ft. bags, \$1.50; ¾ cu. ft. bags, 75c.

POTTING SOIL. For seed flats and pot plants. Sack, \$1.50.

PROPAGATION AIDS

HORMODIN. Powder prepared for rooting cuttings. Pkt., 25c; 1¾ oz., \$1.00.

ROOTONE. Root-forming stimulant for cuttings, seeds and bulbs. ¼ oz., 25c; 2 oz., \$1.00.

TRANSPLANTONE. Reduces losses in transplanting. ½ oz., 25c; 3 oz., \$1.00.

FRUITONE. Delays harvest drop of certain fruits; keeps foliage and berries longer on plants. 2/5 oz., 25c; 2 oz., \$1.00.

GRAFTING WAX. Best grade. ½ lb., 50c; 5 lbs., \$1.50.

SEMESAN. Mercuric disinfectant for seeds, bulbs, etc.; for prevention of attack by fungi. Pkt., 12c; 2 oz., 45c.



GARDEN TOOLS

Space does not permit listing all the tools carried in our store. Here are some of the more important:

LAWN AIDS

DOO-KLIPS LAWN SHEARS. \$1.75 each.

LONG-HANDLED DOO-KLIPS. \$3.00 each.

MAGNUM HOSE CONNECTORS. \$1.00 complete.

Extra Tap Connections. 35c each.

Extra Hose Connections. 65c each.

MAGNUM HOSE NOZZLES. \$1.00 each.

SOD SPIKERS. \$1.85 each.

LAWN EDGERS. \$1.85 each.

DIGGING and CULTIVATING TOOLS

LIGHTWEIGHT SHOVELS. \$1.95 each.

REGULAR POINTED SHOVELS. \$2.45 each.

LONG HANDLED SPADES. \$2.45 each.

D-HANDLED SPADES. \$2.45 each.

GARDEN HOES. \$1.95 each.

BOW RAKES. \$1.95 each.

D-HANDLED SPADING FORKS. \$2.95 each.

Replacement handles available for all the above tools.

LIGHTWEIGHT GARDEN SETS (Trowel, Planter and Cultivator). \$2.95 per set.

PRICES FOR TOOLS SUBJECT TO CHANGE.

James' Quality LAWN SEEDS

OUR SPECIAL BENT MIXTURE. THE BEST ALL-PURPOSE LAWN GRASS SEED. Specially prepared by us from the highest quality seeds that can be produced. The very finest varieties are used to make a smooth, green, velvety lawn free from common grasses which are inclined to produce clumps. It is all plump, heavy seed free from chaff or weed seeds. Sow one pound for a plot 10 by 15 (150 square feet). Price: 1 lb., \$1.60; 5 lbs., \$7.00; 10 lbs., \$12.50.

CALIFORNIA PARK LAWN MIXTURE. A blend of hardy, fine-bladed grasses to which is added a small amount of White Clover. It provides an excellent turf which will withstand hard usage. Sow 1 pound to 100 square feet. 1 lb., 75c; 5 lbs., \$3.25; 10 lbs., \$6.00.

SHADY LAWN MIXTURE. A blend of fine-bladed grasses made especially for growing in shaded spots and under trees. Sow 1 pound to 150 square feet. 1 lb., \$1.50; 5 lbs., \$7.00; 10 lbs., \$12.50.

ASTORIA BENT. The growth is upright, of fine texture and is a rich green. Spreads underground; will grow in heavy soil. Sow 1 pound to 300 square feet. 1 lb. \$2.25; 5 lbs., \$10.00; 10 lbs., \$18.00.

SEASIDE CREEPING BENT. The plant is dwarf and it multiplies rapidly by sending out runners in all directions; from these, new plants are produced, and these in turn grow more runners. Not suited for shade. Sow 1 lb. to 300 sq. ft. 1 lb., \$2.40; 5 lbs., \$11.00; 10 lbs., \$20.00.

CREEPING RED FESCUE. A hardy, fine, round-bladed grass that spreads by underground root-stalks or rhizomes. Slightly reddish at the base. Does well in shade and poor sandy soils. Sow 1 pound to 150 square feet. 1 lb., \$1.25; 5 lbs., \$5.50; 10 lbs., \$10.00.

CHEWINGS FESCUE. Used extensively on putting greens, fairways and tees on golf courses, and does well on any kind of soil. It also produces a stiff, upright plant. Sow 1 pound to 100 square feet. 1 lb. \$1.15; 5 lbs., \$5.25; 10 lbs., \$9.50.

KENTUCKY BLUE GRASS. Makes an excellent lawn of a dark green color. It forms a fine mat, with care and water makes one of the best lawns. Sow 1 pound to 150 square feet. Select grade. 1 lb., \$1.00; 5 lbs., \$4.50; 10 lbs., \$8.00.

PERENNIAL RYE GRASS. A rapid growing grass where quick results are required. It is coarser than Kentucky Blue Grass and thrives in poor soils. It is used as a "nurse" crop in mixtures to keep the lawn green while the better, slow-growing varieties are becoming established. Sow 1 pound to 100 square feet. 1 lb., 40c; 5 lbs., \$1.75; 10 lbs., \$3.25.

RED TOP. A fine-bladed grass that succeeds on almost any soil, although it does best under moist conditions. It is used in almost all lawn mixtures. Should not be planted by itself unless specifically recommended. Sow 1 pound to 200 square feet. 1 lb., 70c; 5 lbs., \$3.00; 10 lbs., \$5.50.

WHITE DUTCH CLOVER. Very low growing sort, principally used in poor ground to give a green cover. Many like it in lawns, especially where grass does not do well. Sow 1 pound to 300 square feet. 1 lb., \$1.50; 5 lbs., \$6.50; 10 lbs., \$11.75.

Please ask for prices on 50 or more pounds.



GARDEN LIBRARY

HOW-TO-DO-IT BOOKS

SUNSET'S VISUAL GARDEN MANUAL. All important garden operations illustrated step by step with carefully executed line drawings. \$1.50.

SUNSET'S COMPLETE GARDEN BOOK. Master work for Pacific Coast Gardeners. An almost limitless fund of information on all of the important annuals, perennials, trees and shrubs in our climate. \$2.00.

SUNSET'S VEGETABLE GARDEN BOOK. A guide to vegetable gardening success—Western varieties and Western methods. \$1.00.

SUNSET'S FLOWER ARRANGEMENT BOOK. A simplified, imaginative approach to flower arrangement; practical suggestions for the amateur. \$1.50.

GARDEN DICTIONARIES

HORTUS SECOND (Bailey). An indispensable one-volume reference for the serious gardener. \$6.00.

CYCLOPEDIA OF HORTICULTURE (Bailey). An all-inclusive work in three volumes, newly revised and up to date. \$35.00.

HOME LANDSCAPING

YOUR BOOK OF GARDEN PLANS (Morris). New and up-to-the-minute; practical landscape plans and suggestions aimed at contemporary California architecture. Charmingly and profusely illustrated for "right and wrong" treatment. \$3.50.

CALIFORNIANA

MANUAL OF PACIFIC COAST TREES (McMinn & Maino). This semi-technical work describes the important native and "adopted" trees growing on the Pacific Coast. Includes keys for identification. \$4.00.

ORNAMENTAL SHRUBS AND WOODY VINES OF THE PACIFIC COAST (Graham & McMinn). A good companion book to "Pacific Coast Trees". Profusely illustrated, plants carefully described; contains keys for identification. \$3.00.

GENERAL

GARDEN FLOWERS IN COLOR (Foley). Contains 350 natural color illustrations, with accompanying cultural directions for each variety. \$2.95.

GARDEN BULBS IN COLOR (McFarland, Hatton & Foley). Illustrates 231 bulb varieties in natural color; concise cultural notes. \$2.49.

ANNUAL FLOWERS (Jenkins). Everything you need to know for "growing your own" from seeds. \$2.75.

PERENNIALS PREFERRED (Jenkins). A complete work on the subject of perennials. \$2.75.

THE E. JAMES NURSERY

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Return postage guaranteed.

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D.C.



POMPON DAHLIAS

DAHLIAS

TUBERS: 50c EACH, 12 FOR \$5.00

DECORATIVE

Flowers are very large, with flat petals extending to the center.

ELINOR VANDERVEER. Satiny pink, informal.

GOLDEN ECLIPSE. Deep yellow, formal.

JANE COWL. Buff and old gold, informal.

LA TORREADOR. Brilliant orange, informal.

POMPON

Small flowers are round and very compact. The best dahlia for cut flowers.

CARDINAL. Cardinal red.

MORNING MIST. Light pink.

WHITE BEAUTY. Pure white.

YELLOW GEM. Clear yellow.

CACTUS

Compact, large flowers have rolled, pointed petals extending to center.

LITTLE DIAMOND. Rose pink.

GRETEL. Orange.

PAY DAY. Red.

SWEET SUE. White.

Sec. 562, P. L. & R.
U. S. POSTAGE

PAID

Oakland, Calif.
Permit No. 967

NIEREMBERGIA Purple Robe. Showy low growing mounds of deep purple flowers concealing the fine cut foliage. All summer. Pkt. 25c.

PENSTEMON, Blue Bedder. Spikes of medium blue flowers. **Firebird.** Fiery red flowers on long spikes. 60c each. Mixed pink, white, red. Pkt. 10c.

Perennial PHLOX. Showy summer flowers, never fail to give a real show. 2 to 3 feet high. For sunny borders. A fine selection of excellent varieties in red, pink, lavender and white. 75c, 12 for \$7.50.

PYRETHRUM roseum. Giant double flowers late spring and summer. 60c.

SALVIA leucantha. Blue flowers with white centers, fall through winter. 60c.

SAXIFRAGA crassifolia. Round leathery leaves and broad round clusters of waxy pink flowers in winter and spring. 75c each.

SCABIOSA caucasica. Beautiful cut flower. Powdery blue; in bloom most of the year. Full or half sun. 2 feet. 75c each; Pkt. 15c.

SHASTA DAISY, Esther Reed. Entirely double white blooms without any yellow at center. Long blooming season. Sun. 60c each.

Marconi. Pure white, semi-double shaggy blooms on strong stems. Excellent cut flowers. Continuous bloomer. 60c each.

SWEET WILLIAM. 12-15 inches, best in full sun or very light shade. Popular old favorites. Mixed colors only. 10c.

THALICTRUM (Meadowrue). 4 to 6 feet; handsome columbine-like foliage and large, loose airy sprays of rosy-lavender flowers. Sun or light shade. Gallon containers, 60c each.

TRITOMA hybrids, Red Hot Poker. Grass-like leaves. Flowers open yellow and turn a bright scarlet. Sun. 75c each.

VIOLET Odorata. The old-fashioned fragrant violet.

PRIMULA polyantha. Colossal Strain. The blossoms of these giants are unbelievably large and the colors are both attractive and unusual. Heavy-textured and good dark green foliage. Pkt. \$1.00, clumps 50c each. (Picture below.)



PRIMULA POLYANTHA COLOSSAL STRAIN

E. James Nursery
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OAKLAND 5, CALIFORNIA